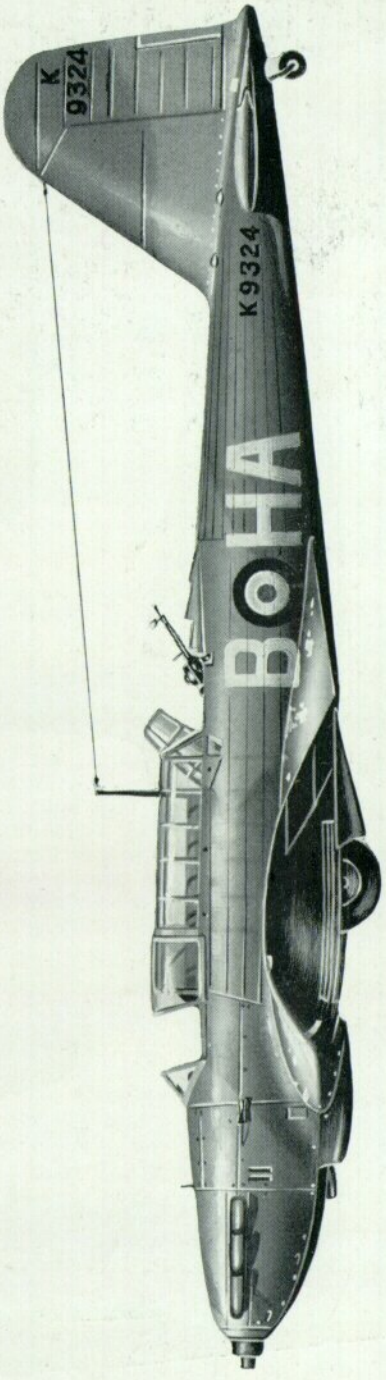
PROFILE
PUBLICATIONS

The Fairey Battle



NUMBER 34

Fairey Battle, K9324, of No. 218 Squadron.

K9324

Serial number on fin and rear fuselage.

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The Fairey Battle

by Philip J. R. Moyes

A Battle of No. 218 Squadron at Auberives-sur-Suippes, France, during the "phoney" war. The roundels on fuselage and under wing appear to have been washed over with a darkish paint. (Photo: Imperial War Museum)

First flown in March 1936, the Fairey Battle was operationally obsolete by 1939 when it was in service as a front-line bomber. Following a gallant and hopeless career in France and, afterwards, a more fortunate spell of operations from Britain, it was relegated (except in a few isolated cases) to training duties in which it contributed more to the war effort that it ever did as an operational machine.

The Battle originated in Air Ministry Specification P.27/32 which was issued in April 1933, and called for a 2-seat single-engined monoplane day bomber which could carry 1,000 lb. of bombs for 1,000 miles at 200 m.p.h. and which would replace the Hawker Hart. Four companies submitted design proposals to meet the specification, Armstrong Whitworth, Bristol, Fairey and Hawker, and from these the A.W.29 and the Fairey entry were ordered in prototype form.

The Fairey day bomber was designed by Marcel Lobelle. The prototype (*K4303*) was built at Hayes and flew for the first time on 10th March 1936 at Northolt, with a 1,030-h.p. Rolls-Royce Merlin I engine driving a three-bladed de Havilland variable-pitch airscrew. Lobelle chose the Merlin on account of its power and compact frontal area and was thus able to design an aircraft which combined exceptionally clean lines with a good speed performance. Service trials at Martlesham Heath showed that the new Fairey bomber offered a performance far in advance of any contemporary day bomber and a maximum speed of 257 m.p.h. was reached.

Meanwhile some (if not all) of the Air Staff had reached the conclusion that the light bomber was outmoded on the score of insufficient range and bomb load to attack the obvious enemy, Germany. However, the pressure for immediate expansion of the R.A.F.'s first-line strength so as to maintain at least numerical parity with the *Luftwaffe* had become irresistible and provision was made for large scale production of the Fairey bomber which later became known as the Battle. The initial production contract for 155 Battles to Specification P.23/35 was placed with Fairey in 1935—before the prototype flew—and a production line was subsequently established at the new factory at Heaton Chapel (Stockport). The first production Battle (*K7558*) made its maiden flight in June 1937, and it was with this aircraft that official handling and performance trials were conducted.

In the performance trials *K7558* did 243 m.p.h. at 16,200 ft. and had a range of 1,050 miles with its maximum bomb load. The powerplant of the first 136 Fairey-built Battles remained the Merlin I and it is interesting to note, incidentally, that the initial order for 200 Merlins for the Battle was the first to be received by Rolls-Royce and it was for this order that the Merlin I was put into production.

THE BATTLE DESCRIBED

The Battle was Fairey's first venture into light alloy stressed-skin construction and it was also the company's first low-wing monoplane. The slim, oval section fuselage was built in two portions. The section

Battle prototype K4303 in original form.

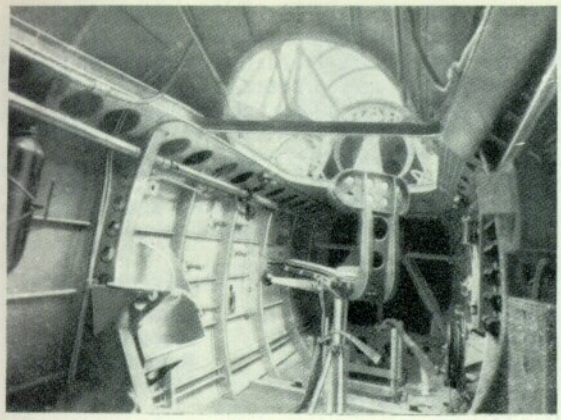
Battle prototype K4303 with original cockpit canopy.

forward of the pilot's cockpit—the engine mounting in fact—was largely made up of steel tubes, bolted and riveted together, while the rear portion was a metal monocoque comprising hoop frames, stamped out in one piece, and Z-section stringers; the rear portion was built up on core jigs. The wings were of two-spar construction, the centre section—partly of steel struts—being built integral with the fuselage. The spars were girder-like at the roots and changed in section to flanged beams as they neared the wing-tips. Inspection panels ran spanwise along the undersides of the wings. The ailerons—like the elevators and rudder—were metal framed with fabric covering while the split trailing-edge flaps were constructed entirely of metal.

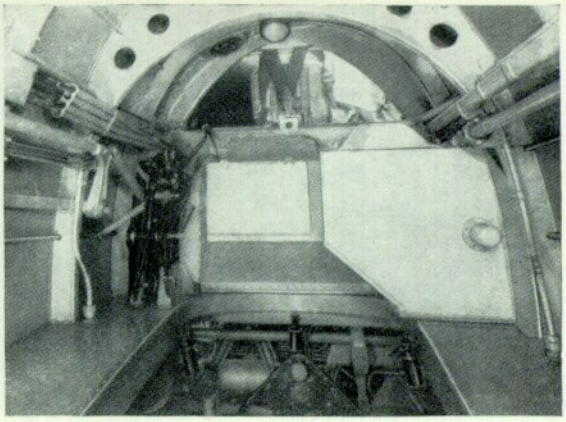
Provision was made in the production Battle for a crew of three, a radio operator/air gunner being added to the pilot and the observer specified by P.27/32. The bombs were carried on hydraulic jacks which retracted into wing cells. When released the bombs fell through specially designed trap-doors except in the case of dive-bombing, when the jacks and their load were lowered below the wing surfaces. Normal bomb load was 1,000 lb. (usually comprising four 250-lb. G.P. bombs) but allowance was made for an overload of 500 lb., the extra bombs being carried on external racks. The observer-cum-bomb-aimer's cabin was situated immediately below the pilot's seat. Bomb aiming was done from the prone position, the target being exposed to view through a large screened aperture which was covered by a sliding panel when not in use. Defensive armament consisted of a fixed 0·303 in. Browning gun in the starboard wing, outside the airscrew arc. Provision was also made for a single Vickers 'K' gun of similar calibre on a Fairey high-speed mounting in the rear cockpit; this mounting allowed the gun to be stowed within the fairing of the fuselage when not in use, but was not in fact installed until the twenty-eighth aircraft (*K7585*).

The Battle was an extremely robust aircraft and has been described as "just too easy" to fly, even for someone who had previously done only an hour's solo in any single-engined type of similar size and complexity. The pilot was seated in a roomy, comfortable cockpit and forward visibility was reasonably good; rear vision, however, was poor. The rear gunner's cockpit, about six feet farther back, featured a tilting hood which was intended, when raised, to screen the gunner from the slipstream. Unfortunately it only did half the job; for although it successfully screened the gunner's back from the slipstream, it allowed the backdraught to curl in and slap him full in the face. Mr. H. A. Taylor, a test pilot who flew a wide variety of aircraft during the war, and afterwards wrote of his experiences in *Flight* under the pseudonym

Battle prototype K4303 at the 1936 R.A.F. Display with revised cockpit canopy adopted on production a/c.



Cabin (looking aft).



Cabin (looking forward).

"Indicator", said of the Battle:

"Undoubtedly my most lasting impression . . . was of the intense heat which could sometimes fill the driving compartment and, in cases where there was an open flare chute, of the cloud of dust which, combined with the overheating, produced quaintly Saharan conditions. Otherwise this aircraft, even to the complete newcomer, handled like a large tin Swallow."

(The B.A. Swallow was a lightly-loaded two-seater, based on the German Klemm, and was a familiar feature of club aerodromes in the 1930s.)

The flap and undercarriage selector levers sprouted from the floor on the pilot's left and, since the undercarriage lever had a not-too-easily-found safety catch, retraction after take-off could be quite a contortionist performance. According to "Indicator", one of the mildly disturbing features of the Battle's take-off was the fact that the change of pitch of the two-position airscrew reduced the recorded revs of the Merlin on the climb to something which had very much the appearance of complete engine failure.

"However, one soon became accustomed to this, and to the extraordinary arrangement of the undercarriage lights which, in a very real sense, shouted 'wheels' at the driver in unmistakable terms."

Above: *Gunner in an R.C.A.F. Battle Trainer.* (Photo: R.C.A.F.)

INTO SERVICE

Further orders for the Battle were placed with Fairey in 1936 to Specification P.14/36 and when the Shadow Factory Scheme came into operation, the resources of Austin Motors at Longbridge (Birmingham) were added to the Battle production programme, the firm receiving an initial order for 863 aircraft to Specification P.32/36.

As mentioned earlier, the first production Battle flew early in 1937. By the end of that year 85 Battles had been completed by the parent company and several R.A.F. squadrons had been re-equipped, or were in process of re-equipping, with the type. The first of these was No. 63 Squadron which had reformed at Andover in February 1937, flown Hinds,

Below: *Rows of Battles nearing completion in The Austin Motor Company's Longbridge (Birmingham) factory before the war. This photograph vividly depicts the production capacity of a "shadow factory": some seventy Battles can be seen in various stages of construction.* (Photo: "The Aeroplane")

Battle K7650 of No. 63 Squadron in pre-Munich markings.

then Audaxes and had, since March, been based at Upwood. It received its first Battle (*K7559*) on 20th May 1937, got three more in June and by the year's end had 15 on charge. Between 2nd July and 21st March 1938, No. 63 conducted Battle development trials using *K7562*, *7563* and *7566*. Other squadrons which received Battles in 1937 were Nos. 105, 226, 52 and 88 in that order. No. 105 Squadron's link with the Battle is commemorated in the unit's badge—a battle axe, with the motto "Valiant in Battles".

The first Austin Motors-built Battle (*L4935* with Merlin II engine) flew on—or else shortly before—22nd July 1938 (*not* on 25th August 1938 as sometimes stated) and before the year was out 29 aircraft had been completed at Longbridge. By now the Battle was indubitable obsolescent but because of the need to maintain existing labour forces intact and difficulties in getting other types into production at Heaton Chapel and Longbridge to take its place, the type was kept in production. As a result of stop-gap orders, the steady flow of Battles continued from the two factories until late 1940, by which time a grand total of 2,185 aircraft had been manufactured. Not all of these were bomber aircraft (some being built as dual-control trainers or target-tugs, as will be mentioned later) nor were they all powered by the Merlin I. The type of Merlin available for installation in the Battle varied constantly, the majority receiving Merlins II and III but some getting the Mks. IV and V; the last-named mark of Merlin operated at higher boost pressures and produced increased power at altitude. In order to differentiate between the types of Merlin installed, the Battles were retrospectively designated Mks. II, III, IV and V according to the powerplant.

By May 1939 a total of 17 Battle squadrons was in being, and these are enumerated below:

No. 1 Group (An all-Battle Group)

Nos. 15 and 40 Sqdns.	Abingdon
Nos. 103 and 150 Sqdns.	Benson
Nos. 12 and 142 Sqdns.	Bicester
Nos. 88 and 218 Sqdns.	Boscombe Down
Nos. 105 and 226 Sqdns.	Harwell

No. 2 Group

Nos. 35 and 207 Sqdns.	Cottesmore
Nos. 52 and 63 Sqdns.	Upwood
No. 98 Sqdn.	Hucknall

No. 5 Group

Nos. 106 and 185 Sqdns.	Thornaby

The No. 2 Group Battle squadrons assumed a non-mobilising training rôle and in September 1939 they were transferred to No. 6 (Training) Group of Bomber Command and made into Group pool squadrons or, in the case of No. 98 Squadron, a reserve squadron. It was from the No. 6 Group pool squadrons that some of the Operational Training Units were formed in the spring of 1940.

WAR OPERATIONS WITH R.A.F.

The ten mobilising squadrons of No. 1 Group formed the first echelon of the Advanced Air Striking Force, flying on 2nd September 1939 to previously-selected airfields and landing grounds in the heart of the champagne country to await the arrival, some days later, of the ground crews. One Battle (from No. 40 Squadron) failed to arrive; it came down in the Channel owing to engine failure but the crew were rescued. The Battles were quickly dispersed about their landing grounds and hidden among trees or under

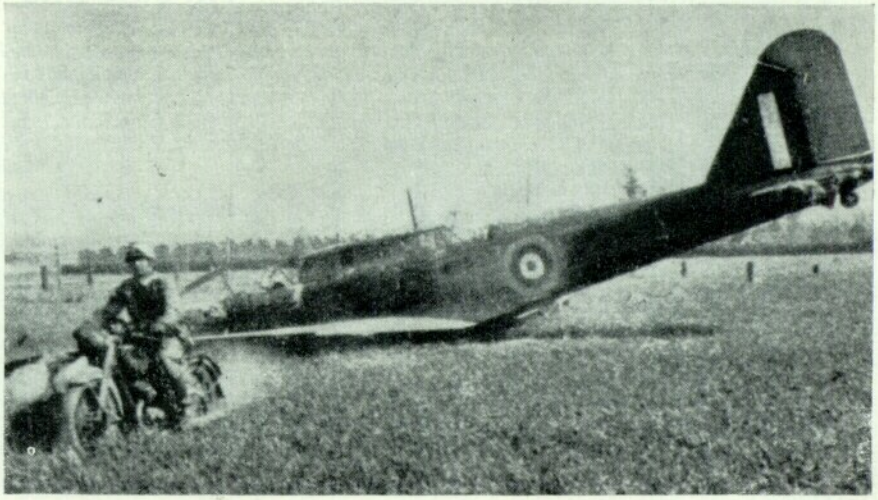
Battle L4958 of No. 63 Squadron in pre-war but post-Munich markings. Photo shows that codes were "ON" and not "NE" as thought by air historians hitherto. (Photo: S/L F. E. Dymond)

Battles, K9353 HA-J, K9324 'B' and K9325 'D' of No. 218 Squadron over French territory during the "phoney" war. When the Battle of France began on 10th May 1940 there were more than 100 Battles serviceable in the A.A.S.F. By the close of 14th May, after a series of gallant and bloody actions, the wrecks of a great many of them lay strewn about the valleys of the Ardennes.
(Photo: Imperial War Museum)

camouflage nets. The idea behind their despatch to France was that, should the Germans begin bombing, these light bombers could retaliate on Ruhr targets at closer range than from Britain. As things turned out, both the Allies and the Germans refrained from starting any unrestricted bombing offensive and this phase became known as the "phoney" war. The Battles were employed on armed daylight reconnaissance over the Siegfried Line, albeit not without suffering losses. On 20th September three Battles from No. 88 Squadron (Mourmelon-le-Grand) were intercepted by enemy fighters during a patrol and two of them shot down. However, the score was partly levelled: for Sgt. F. Letchford, rear gunner in the other Battle (*K9243*) destroyed a Messerschmitt Bf. 109; this was the R.A.F.'s first air combat "kill" of W.W.II. Ten days later, on 30th September, five Battles of No. 150 Squadron (Écury-sur-Coole) on their way to reconnoitre a strongly-defended position in the Saar, were "jumped" by 15 Bf. 109s and in the long running-fight that ensued three Battles were shot down and the other two were so badly damaged that they eventually force-landed (one of them force-landed in France but somersaulted and was destroyed by fire). This incident underlined forcibly the necessity for bombers to be escorted by fighters when over enemy territory during daylight.

Following No. 150 Squadron's tragic encounter, efforts were made to mount a "free" gun underneath the Battle to eliminate a dangerous blind spot, but though various mountings were tried none proved entirely satisfactory, so the Battle remained extremely vulnerable to fighter attack from below. During the winter of 1939–40 the activities of the Battle force (which was reduced by two squadrons in December when Nos. 15 and 40 Squadrons returned to the U.K. to re-arm with Blenheims) were largely confined to training and exercises. About the middle of March 1940 it was given the task of making several short-range leaflet raids over Rhineland towns but otherwise it saw little activity until the German offensive against France and the Low Countries.

The German assault came at dawn on 10th May 1940, and at midday (and when the already long-overdue permission of the French Generalissimo to start bombing the enemy was still not forthcoming) the R.A.F. C.-in-C. British Air Forces in France, ordered the first wave of Battles into action against German troops advancing through Luxembourg. As it was impossible to provide the Battles with a close fighter escort, the bombers were briefed to make a very low approach to the target and to attack from 250 feet, using bombs fused for eleven seconds' delay. The orders were carried out, but a storm of machine gun and small arms fire rose from the German columns and three of the Battles were shot down. A similar fate overtook the second wave of bombers which attacked during the afternoon. Of the 32 Battles despatched that day, 13 were lost and all the rest damaged. On the following day, of eight Battles despatched (by Nos. 88 and 218 Squadrons) only one returned. On 12th May an attempt was made to check the German advance towards Brussels by bombing two road bridges over the Albert Canal. Five volunteer crews of No. 12 Squadron—the "Dirty Dozen"



F/O Norman Thomas's Battle III P2332 PH-F of 'A' Flight, No. 12 Squadron, shot down by German flak during the famous raid on the Maastricht bridges, 12th May 1940.

Above and left: *Battle (T) R7365 of R.A.F. The first dual-control trainer Battle flew in 1939 and production began with P6616.* Below: *Battle Target-tug 1699 of R.C.A.F. The prototype (L5598) was built in February 1940 and some T.T.s were converted from Battle bombers. Battle T.T.s also served with the R.A.F., Royal Navy, and R.A.A.F.*

(Photos: Imperial War Museum)

as it was now known in the Service—were despatched and all attacked the bridges through withering flak and small arms fire. All were shot down but one of the bridges, that at Veldwezelt, was seriously damaged, and the action resulted in the posthumous award of the Victoria Cross to F/O D. E. Garland and his observer, Sgt. T. Gray, who led the formation attacking the Veldwezelt bridge. They were the first R.A.F. V.C.s of W.W.II.

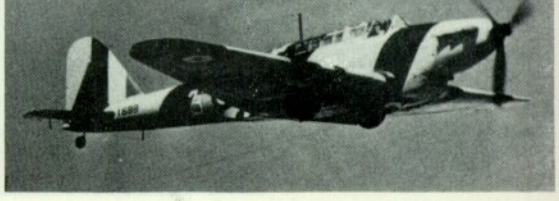
In the early morning of 14th May ten Battles of Nos. 103 and 150 Squadrons attacked German pontoon bridges in the Sedan area and, furthermore, did so without loss—for no enemy fighters were encountered and the tactical low approach had now been abandoned. In the afternoon the entire available force of these aircraft in France was despatched against bridges and troop columns at Sedan. This time, however, things were very different: the Bf. 109s were now on guard. No. 12 Squadron lost four aircraft out of five; No. 142 Squadron, four out of eight; No. 226 Squadron, three out of six; No. 105 Squadron, six out of eleven; No. 150 Squadron, four out of four; No. 88 Squadron, one out of ten; No. 103 Squadron, three out of eight; and No. 218 Squadron, ten out of eleven. In all, from the 63 Battles which took off, 35 did not return. To these losses were added five out of eight Blenheims of Nos. 114 and 139 Squadrons which had also figured in the attack. This brought the total losses in the raid to 40 bombers out of 71. No higher rate of loss in an operation of comparable size has ever been experienced by the R.A.F.

Despite their appalling losses and frequent transfer of bases as the enemy advanced, the Battle squadrons struggled on valiantly until mid-June when, with the war situation in France now hopeless, the few remaining serviceable aircraft were flown back to England and No. 1 Group was re-formed. It was once again equipped with Battles and for several months its squadrons (which eventually included some Polish units) operated by night from Newton (Notts.) and northern airfields against Dutch and French ports in which Hitler was massing his invasion craft for Operation *Sea Lion*—the projected invasion of Britain. The last operational sorties by No. 1 Group's Battles were flown on 15/16th October 1940, when No. 301 (Polish) Squadron bombed Boulogne and Nos. 12 and 142 Squadrons bombed Calais. During late 1940 No. 1 Group's Battle squadrons converted to Wellington aircraft.

When Nos. 88 and 226 Squadrons had remustered following the French collapse they took their new Battles to Sydenham (Belfast) and were engaged until 1941 in flying regular dawn and dusk patrols along the entire coast of Northern Ireland as a precaution against possible landings by enemy agents. In July 1940, No. 98 (Battle) Squadron which had also flown Battles in France—though not in an operational rôle—was posted to Iceland where it subsequently saw eleven and a half months' active service with No. 15 Group, Coastal Command.

EXPORTS AND TRAINING ROLES

The South African Air Force purchased a few Battles (beginning with *L5374* for evaluation tests, two others being *R3938* and *R3945*) and operated them in the Western Desert and also in East Africa; one of its squadrons (No. 11) is known to have used Battles until early 1942. Four Battles were reserved for Turkey and actually painted in Turkish markings before their delivery was halted by the British Government. Others sold to Turkey in mid-1939 were *N2111–*



Right: *Battle 1640 of No. 1 Bombing and Gunnery School near Jarvis, Ontario.*

Below: *Another R.C.A.F. Battle bombing and gunnery trainer—No. 1737.* (Photo: R.C.A.F.)

2117, *N2120–2123*, *N2130–2131*, *N2149*, *N2153–2155*, *N2211–2218* and *N2220–2222* (29 a/c.). The Battle was popular with the Turkish Air Force crews, particularly on account of its manœuvrability and much time was spent in low flying—a pastime which reportedly wrote-off most of the aircraft! One Battle (*N2219*) was consigned by sea to Poland in September 1939, but is believed to have been diverted to the Middle East. Nine aircraft earmarked for the Greek Air Force (*P6607–6615*) were retained for R.A.F. use.

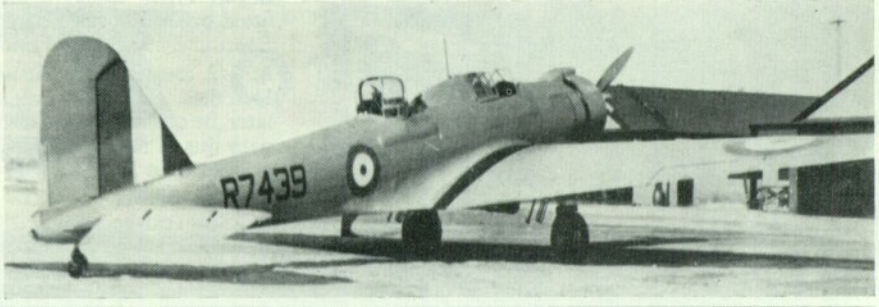
In addition to being used for operational duties, the Battle was used for a variety of training rôles. It served as a dual-control trainer (with two separate cockpit covers in place of the long canopy), a bombing and gunnery trainer (sometimes fitted with a Bristol Type I turret) and also as a target-tug; and it not only flew with the R.A.F. in the training rôle but also with the R.C.A.F., the R.A.A.F. and the S.A.A.F.

The R.C.A.F. received its first Battles in August 1939, when eight were allocated to Camp Borden. More followed from England and a total of 802 eventually served with the R.C.A.F. They were used as dual-control trainers, target-tugs and gunnery trainers in the Bombing and Gunnery Schools of the British Commonwealth Air Training Plan. With the introduction of Bolingbrokes and Harvards, the number of Battles in service declined, but they continued in service until the end of hostilities. Battles were also flown by Nos. 111 and 122 Squadrons of the R.C.A.F.

One of the many Battles shipped to Canada (*R7439*) was re-engined by Fairchild at Quebec with an 840-h.p. Wright Cyclone GR–1820–G3B, which would have been installed in more Battles had supplies of the Merlin failed. In the event, this did not happen and only *R7439*, complete with a Bristol turret, was converted.

In Australia the R.A.A.F. prefix A22 was allocated to the Battle, but the aircraft (unlike those shipped to Canada) retained their R.A.F. serial numbers. The

Right and below: *The Wright-Cyclone Battle R7439.*



first four Battles (*P2167*, *P2169*, *P5239* and *P5247*) were delivered to No. 1 Aircraft Park at Geelong on 30th April 1940 and the first assembled aircraft, *P5239*, was test flown on 29th June 1940. Thereafter, Battle deliveries steadily increased until the 366th and last Battle, *V1202*, was received at No. 2 A.P. on 7th December, 1943. In addition to the bomber version, a number of Battle target-tugs and Battle dual-control trainers were imported. Battles served mainly at Bombing and Gunnery Schools until 1945, and were finally phased out after service in 1949. In 1940 P/O R. Givens of No. 88 Squadron, R.A.F., flew Battle *K9297* in operations over France with the R.A.F. and in 1941 he flew the same aircraft, *K9297*, in Australia as a F/Lt. instructor on exchange duty with the R.A.A.F.

Of the many Battles used at home by the R.A.F. for training, one eventually found its way to Eire. This was *V1222* of No. 4 Air Observers' School, West Freugh, which was interned on 24th April 1941 after landing in Waterford due to a navigational error made by its Polish pilot. Impressed into the Irish Air Corps as '92', it was used for some years as a target-tug, being eventually struck off charge on 3rd May 1946.

ENGINE TEST-BEDS

Several Battles were adapted as engine test-beds and the most noteworthy of these special variants are set out below:

K9370. Test-bed for 2,000 h.p. experimental Fairey P.24 Prince 24-cylinder, double-banked engine, driving two three-blade co-axial airscrews independently. Had a very large ventral radiator and double-row exhausts. First flew with P.24 on 30th June 1939 and after 86 hrs. 50 mins. test flying in Britain up until 5th December 1941 was shipped to U.S.A. where it was air tested at Wright Field. In all, the Prince F.T.B. is believed to have accomplished some 250 hours in flight.

K9222. Test-bed for 1,200-h.p. Rolls-Royce Exe 24-cylinder 'X'-type engine which was a pressure-air-cooled variant of the Vulture. *K9222* was converted before the war and testing continued at Hicknall for a long time. A stubby intake was situated under the spinner and two small nostril intakes over the cowling; the intake, however, proved inefficient and the square-cut entry was re-shaped to more pleasing lines with an auxiliary intake underneath. The Exe was considered for a Fairey Spearfish project, but no production was forthcoming and it is believed that *K9222* was used for the R.-R. Griffon.

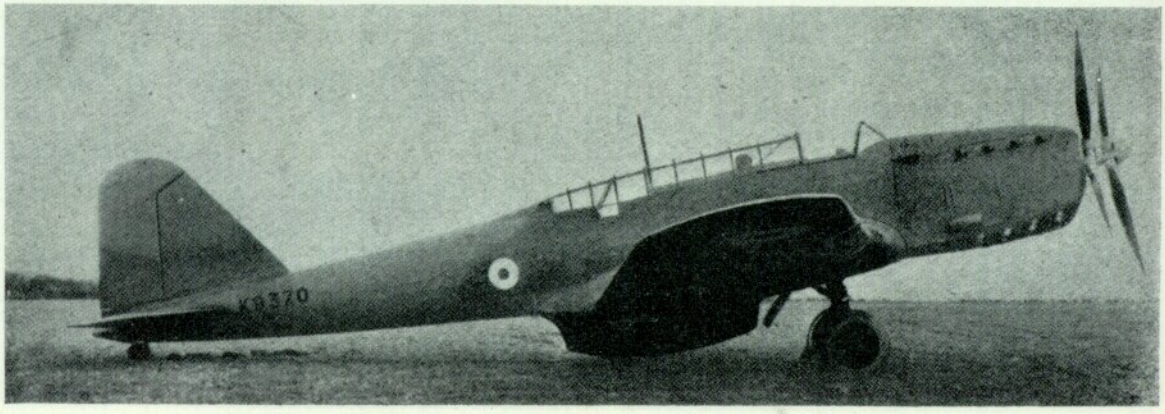
K9270 and *L5286*. Test-beds for Napier Sabre. Both a/c fitted with a fixed undercarriage, large ventral radiator and auxiliary intake. *K9270* (Sabre) first flew at Northolt on 31st May 1939 and subsequently logged 375 flying hours from Luton before retirement in June 1942. *L5286* (Sabre) was completed at Luton in March 1941 and after logging 33 hours' flying from that airfield it was handed over to the R.A.E. for further tests. In all the Sabre Battles logged about 700 hours.

K9240. Test-bed for 955-h.p. Napier Dagger VIII. Supplied to Napier in 1938 and tested both at Northolt and R.A.E. Experiments conducted with super-charging, cooling and water injection, the latter providing very useful data for the water injection system on the Sabre later in the war.

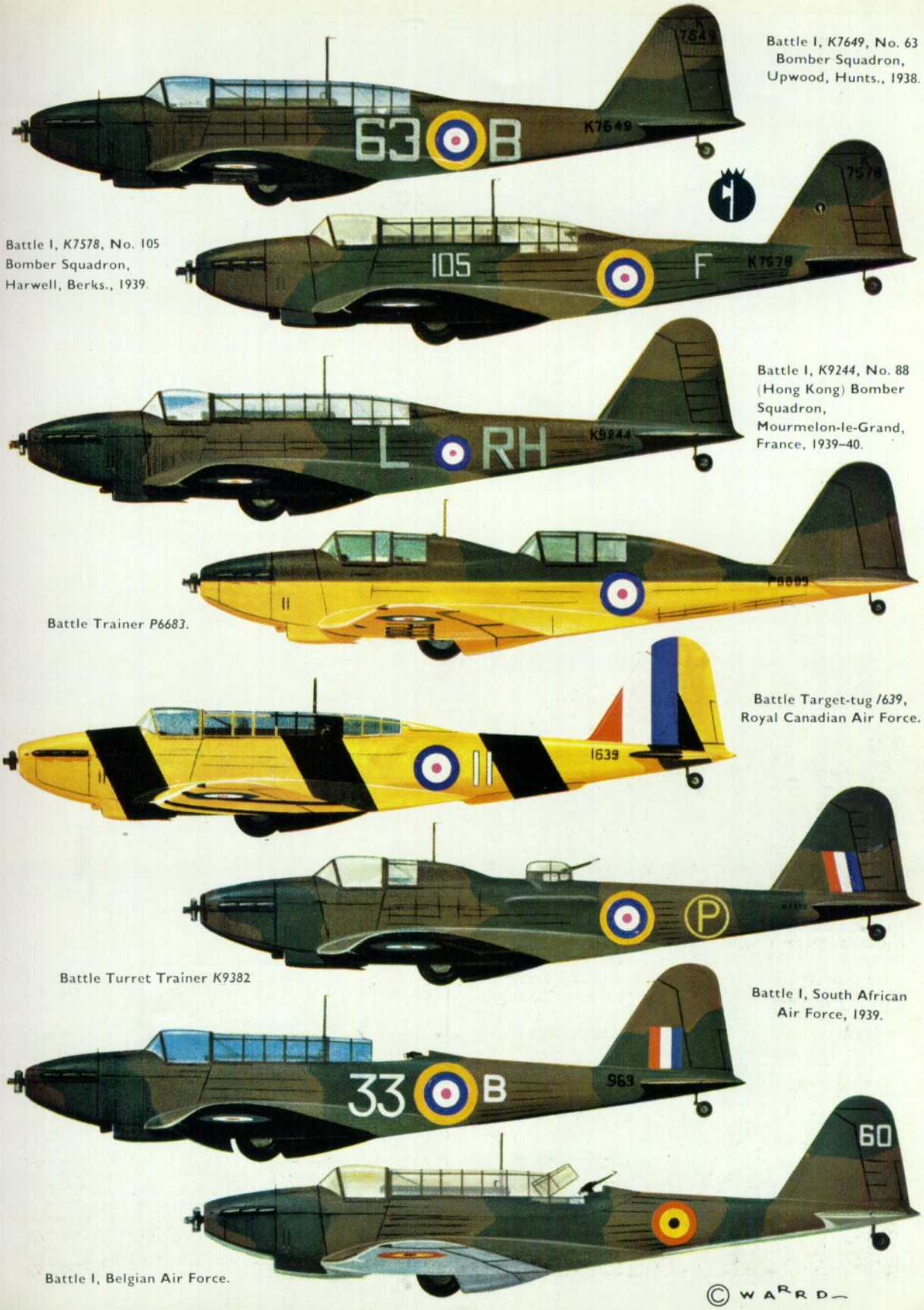
K9331. Test-bed for 1,010-h.p. Bristol Taurus T.E.1M. Began flight trials in June 1938 and subsequently fitted with Taurus III, trials with latter starting in February, 1939. Fixed undercarriage.

N2042 and *N2184*. Test-beds for 1,300-h.p. Bristol Hercules II. Trials began February 1939. *N2042* later fitted with a fan-cooled Hercules XI and flown with this at R.A.E. in 1942, being eventually scrapped at Filton in Feburary 1945. Both aircraft had fixed undercarriages.

K2234. Test-bed for 1,280-h.p. Rolls-Royce Merlin XII. Chin radiator installed.



Two views of the Fairey P.24 Prince Battle, K9370. In the nose close-up one half of the engine is not running and its airscrew is static.



Battle I, *K7649*, No. 63 Bomber Squadron, Upwood, Hunts., 1938.

Battle I, *K7578*, No. 105 Bomber Squadron, Harwell, Berks., 1939.

Battle I, *K9244*, No. 88 (Hong Kong) Bomber Squadron, Mourmelon-le-Grand, France, 1939–40.

Battle Trainer *P6683*.

Battle Target-tug *1639*, Royal Canadian Air Force.

Battle Turret Trainer *K9382*

Battle I, South African Air Force, 1939.

Battle I, Belgian Air Force.

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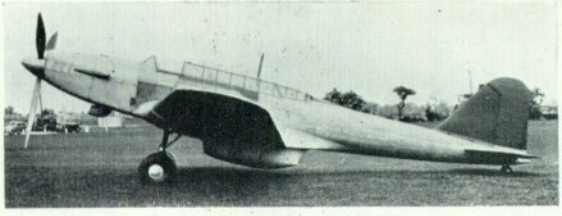
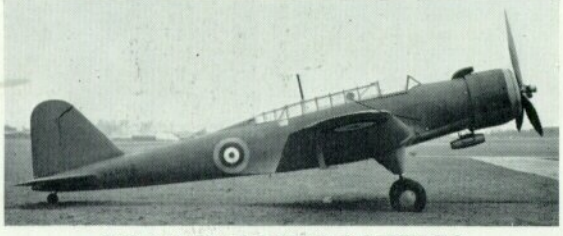
The Exe Battle K9222.



One of the two Sabre Battles.

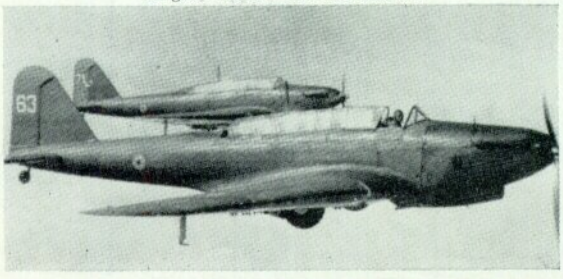
Above: *The Taurus Battle, K9331.*
Below: *One of the Hercules Battles (N2042).*



BELGIAN-BUILT BATTLES

In addition to the 2,185 Battles built in the U.K., eighteen were constructed by Avions Fairey at Gosselies for the Belgian Air Force. These aircraft were delivered early in 1938 and orginally equipped Nos. 5 and 7 Squadrons of the 3rd Group, based at Evère. The Belgian Battles, incidentally, had a longer radiator cowling and a smoother camouflage finish than the British aircraft, both of which refinements contributed to a slightly improved performance They were powered by Merlin III engines. On 11th May 1940 nine of the Battles made a gallant attempt to destroy the Albert Canal bridges and in the process six of them were lost.

Belgian Battles Nos. 63 and 71.



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PRODUCTION

A total of 2,185 Battles was built in Britain (1,156 by Fairey and 1,029 by Austin Motors) out of 2,419 ordered. Figure of 2,185 included 226 Battle T.T.Is and 100 Battle(T)s. Several aircraft built as bombers were subsequently converted to target-tugs or trainers.

1 prototype	K4303	
155	K7558–7712.	(First 136 a/c built with Merlin I. Remainder had Merlin II. K7587 delivered to Austin as pattern m/c.)
311	K9176–9486.	(Merlin II standard powerplant. K9181 and 9188 delivered to Austin as pattern m/c's).
863 (Austin)	L4935–5797.	(L4935–4937 non-standard. L4935–4993, Merlin II; L4994 *et seq.*, Merlin III. L5598–5797 (200 a/c) produced as T.T.Is).
189	N2020–2066, N2082–2131, N2147–2190, N2211–2258. (Several conversions to trainers. N2219 consigned to Poland and others to Turkey—see pp. 8 & 9).	
150	P2155–2204, P2233–2278, P2300–2336, P2353–2369.	
50	P5228–5252, P5270–5294.	
200	P6480–6509, P6523–6572, P6596–6645, P6663–6692, P6718–6737, P6750–6769 (P6616–6769 (100 a/c) built as trainers, i.e. Battle (T)s).	
100 (Austin)	R3922–3971, R3990–4019, R3035–3054 (mostly for Empire Air Training Scheme).	
100	R7356–7385, R7399–7448, R7461–7480 (mostly delivered direct to Canada).	
66 (Austin	V1201–1250, V1265–1280 (T.T.Is).	

An additional 18 Battles were built by Avions Fairey in Belgium.

SPECIFICATION

Powerplant (Battle Mk.III): One Rolls-Royce Merlin III 12-cylinder 60° Vee, liquid-cooled, supercharged engine developing 880 h.p. for take-off and 1,440 h.p. at 5,500 ft.

Dimensions: Span 54 ft.; length 52 ft. 1¾ in.; height 15 ft. 6 in.; chord at root 11 ft. 4 in.; chord at tip 5 ft.; wing area 422 sq. ft.; track 9 ft. 9 in.

Weights: Weight empty 6,647 lb.; crew and parachutes 400 lb.; fixed military equipment 573 lb.; removable military equipment 1,432 lb.; fuel and oil 1,740 lb.; weight loaded 10,792 lb.

Loadings: Wing loading 25·6 lb./sq. ft.; power loading 10·4 lb./h.p.

Performance: Max. level speed at sea level 210 m.p.h.; at 10,000 ft. 240 m.p.h.; at 15,000 ft. 257 m.p.h.; at 20,000 ft. 250 m.p.h. Landing speed 60 m.p.h. Time to 5,000 ft. 4·1 min.; to 10,000 ft. 8·4 min.; to 15,000 ft. 13·6 min.; to 20,000 ft. 21·4 min. Service ceiling 25,000 ft. Range at 16,000 ft. at 200 m.p.h. 1,000 mls.; at 16,000 ft. at 257 m.p.h. 640 miles.

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